

WP14

Consistency

Design of Software Architectures

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Role of the software architecture



to provide
solution direction
for
most important properties
that are
the most difficult to realise

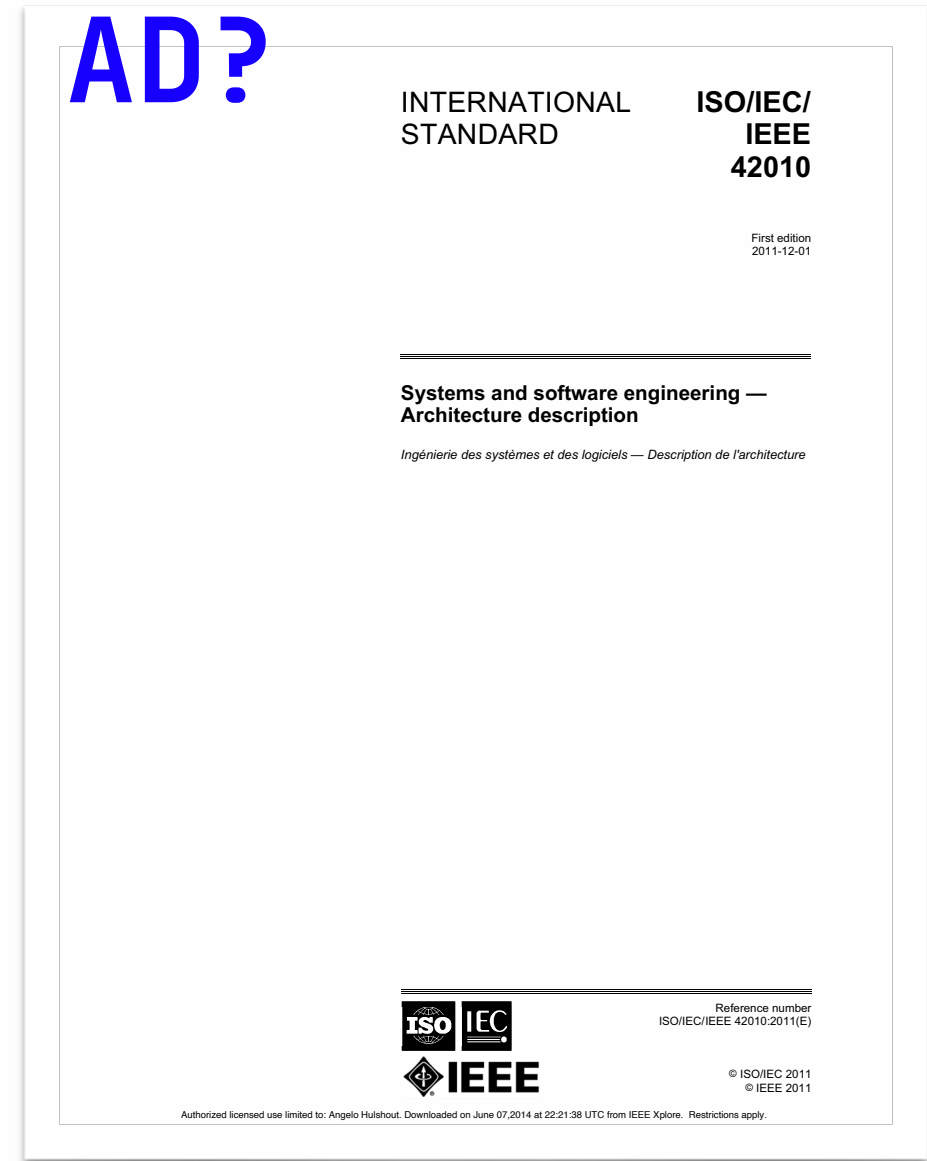


What should be in the AD?

- statements
- implementation guidance
- introduction
- domain jargon
- references to sources
- assumptions
- stakeholder analysis
- concerns

What should be in the AD?

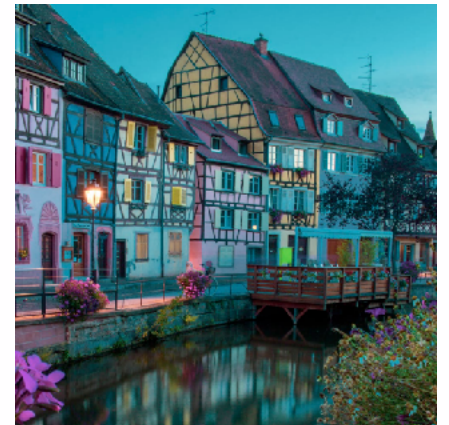
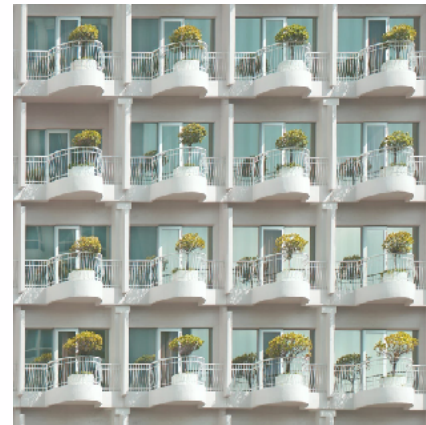
- Introduction
- Identification & overview
- Stakeholders & concerns
- Architecture viewpoints
- Views & models & relations
- Architecture rationale
 - including decisions



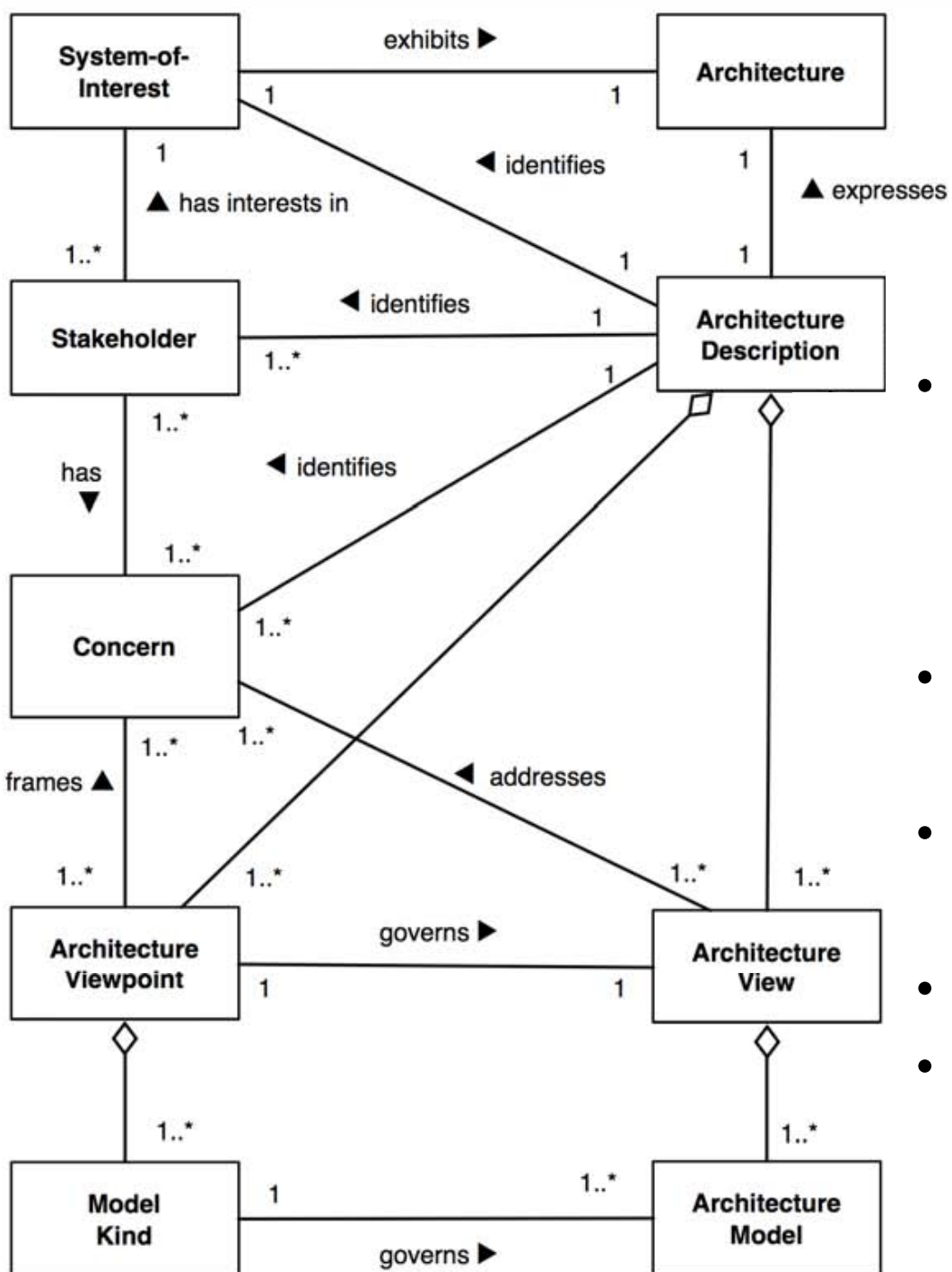
Intended audience?

- Those who use, own or acquire the system
 - **clients**
- Those who develop, describe and document architectures
 - **architects**
- Those who develop, deliver and maintain the system
 - **devs, designers, coders, QA, testers**
- Those who oversee & evaluate systems
 - **auditors**

AD should contain...



How to use 42010?



- Conceptual model provides architecting guidance
 - Completeness analysis
 - Consistency analysis
- Basis for other architecture concepts
 - Extend it!
- Basis for documentation methods
 - (e.g. templates)
- Content listings are check points
- A guideline, not a law

Filing 42010 template ≠ architecting

- No architecture creation/reasoning → decision
- No architecting as activity → process
- No architecting by reference → pattern
- No general specification:
 - statement
 - specification
 - aspect

- Use an extended subset!

Related...

- **Systems**
 - stakeholders
 - containers, plugins, components, ...
- **Processes**
 - realisation
 - processes organise changes/activities
 - software process is a part of the overall process
 - roles, steps, milestones, deliverables, rules

Recall: Suggested Structure

- Introduction [WP01] [WP02] [WP05] [WP14]
- System scope [WP03] [WP10]
- Environment [WP04] [WP11]
 - Stakeholders and their concerns [WP06] [WP07] [WP08]
 - Related systems, processes, orgs, stakeholders [WP12] [WP18]
 - Main QA scenarios and use cases [WP19] [WP20]
 - Trends and developments [WP13]
- Dominant decomposition/style [WP17]
- Design decisions [WP11] [WP15] [WP16]
- Views with design patterns [WP09]
- Consistency [WP05] [WP14]
- Appendix [WP05] [WP09] [WP11]

Revisit the document

- Use an extended subset of **ISO/IEC/IEEE 42010**
- Is the **scope** defined? Do you communicate the **context**?
- Do you have enough **stakeholders**? **Concerns**?
- Are stakeholders **linked** to concerns?
- Do you have all the **viewpoints**?
- One **view** per viewpoint